



**Broad Agency Announcement**

**Joint DARPA / ONR**

**Long Range Anti-Ship Missile Demonstration**

**DARPA-BAA-08-41**

**Defense Advanced Research Projects Agency  
Tactical Technology Office**

**June 6, 2008**

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## **Part One: Overview Information**

- **Federal Agency Name** – Defense Advanced Research Projects Agency (DARPA), Tactical Technology Office (TTO)
- **Funding Opportunity Title** – Long Range Anti-Ship Missile Demonstration
- **Announcement Type** – Broad Agency Announcement – Initial Announcement
- **Funding Opportunity Number** – Broad Agency Announcement (BAA) 08-41
- **Catalog of Federal Domestic Assistance Numbers (CFDA)** – 12.910 Research and Technology Development
- **Dates**
  - Initial Proposal Due Date: August 6, 2008
  - Industry Day: May 6, 2008
- **Anticipated individual awards** – Multiple awards are possible.
- **Types of instruments that may be awarded** – Procurement contract or other transaction.
- **Any cost sharing requirements** – None, unless required by law.
- **Agency contact**
  - Technical Point of Contact (POC)
    - Mr. Rob McHenry, DARPA/TTO
  - Contractual Point of Contact (POC)
    - Mr. Christopher Glista, DARPA/CMO

DARPA/TTO  
ATTN: BAA-08-41  
3701 North Fairfax Drive  
Arlington, VA 22203-1714  
EMAIL: BAA08-41@darpa.mil

- **Other** – A classified annex containing additional information is available upon request as described in Section 1.1 of Part Two of this announcement.

## **Part Two: Full Text of Announcement**

### **1.0 FUNDING OPPORTUNITY DESCRIPTION**

The Defense Advanced Research Projects Agency often selects its research efforts through the Broad Agency Announcement (BAA) process. The BAA will appear on the FedBizOpps website, <http://www.fedbizopps.gov/>. The following information is for those wishing to respond to the BAA.

The Long Range Anti-Ship Missile Demonstration program is a joint DARPA/ONR effort to rapidly develop and demonstrate a ship launched standoff anti-ship strike weapon capable of achieving mission kill against selective surface targets at significant standoff ranges. The program will develop technologies that enable U.S. surface platforms to engage other surface units from well outside direct counter-fire ranges, with inherent capability to ensure weapon survivability against advanced defensive systems. The program should achieve robust integrated flight test of a prototype system no later than three years after contract award. Proposers are encouraged to provide best performance solutions based on innovative application of technologies that can realistically achieve flight status within this timeframe. Consideration should be given to terminal survivability and lethality approaches that are effective against current and projected ship defensive systems. The extensibility of terminal systems to future delivery vehicles with enhanced range, speed, or launch platform flexibility is also of interest.

The program will be conducted in two phases, and responses to this BAA should cover both phases with Phase 2 priced as an option. Performer(s) in Phase 1 will fully develop their system concepts, generate preliminary system designs, estimate procurement and lifecycle costs, conduct any prudent risk reduction testing, and support government analytical evaluation of design effectiveness. Phase 1, approximately nine (9) months, will culminate in a preliminary design review (PDR) and independent technical assessment. Phase 2 performer(s) will be selected based on overall performance and a technical assessment of their Phase 1 PDR results. Phase 2 will progress through detail design, component maturation and testing, system integration including subsystem verification testing, flight test planning, long lead procurement, and a critical design review (CDR). Upon successful completion of a CDR the performer will continue with final system fabrication, integration, and testing as required to achieve a full-scale flight test and integrated demonstration of kinematic performance, guidance, target discrimination and acquisition, terminal survivability techniques, and warhead lethality. It is strongly desired that the full effort, including the integrated demonstration, be completed within thirty-six (36) months from contract award.

Integrated system proposers should seek out innovative approaches for the operational characteristics described in Section 8. Although the intended demonstration under this effort is a ship launched anti-ship missile, solutions which could be adapted to other launch platforms, such as aircraft and submarines, and solutions which offer potential multi-mission capability for land strike, are considered advantageous.

Further technical details and program go/no-go metrics are provided in Section 8.

## **1.1 CLASSIFIED ANNEXES**

A classified annex at the secret level contains supporting information and must be requested via email to BAA08-41@darpa.mil. Requests should include at a minimum the company name, name and phone number of the technical POC, name and phone number of the Facility Security Officer (FSO), CAGE code, statement of facility clearance and safeguarding capability, and a valid address for receiving classified material at the appropriate level. DARPA will verify the facility clearance and the clearance of the recipient before mailing the classified material. Proposers should allow at least five (5) business days for processing requests for the classified annex plus time for delivery.

## **2.0 AWARD INFORMATION**

Multiple awards are anticipated. The amount of resources made available under this BAA will depend on the quality of the proposals received and the availability of funds. Awards may be funded solely by DARPA, solely by ONR, or jointly by both DARPA and ONR.

The government reserves the right to select for negotiation all, some, one, or none of the proposals received in response to this solicitation, and to make awards without discussions with proposers. The government also reserves the right to conduct discussions if the source selection authority later determines them to be necessary. If warranted, portions of resulting awards may be segregated into pre-priced options. Additionally, DARPA reserves the right to accept proposals in their entirety or to select only portions of proposals for award. In the event that DARPA desires to award only portions of a proposal, negotiations may be opened with that proposer. If the proposed effort is inherently divisible and nothing is gained from the aggregation, proposers should consider submitting it as multiple independent efforts. The government reserves the right to fund proposals in phases with options for continued work at the end of one or more of the phases.

Awards under this BAA will be made to proposers on the basis of the evaluation criteria listed below (see Section 5, "Application Review Information"), and program balance to provide overall value to the government. Proposals identified for negotiation may result in a procurement contract or other transaction depending upon the nature of the work proposed, the required degree of interaction between parties, and other factors. The government reserves the right to choose the appropriate instrument.

## **2.1 PERIOD OF PERFORMANCE**

It is strongly desired that the total effort, including integrated flight demonstration, be completed in thirty-six (36) months or less after contract award. A period of performance and phase structure should be proposed that the proposer considers realistic and reasonable for completion of the proposed work in view of this guidance.

### **3.0 ELIGIBILITY INFORMATION**

#### **3.1 ELIGIBLE APPLICANTS**

Due to security requirements, only U.S. contractors who are capable of receiving, processing, and storing export controlled and classified information associated with this effort are eligible. Foreign participants and/or individuals may participate as subcontractors or consultants to the extent that such participants comply with any necessary non-disclosure agreements, security regulations, export control laws, ITAR regulations, and other governing statutes applicable under the circumstances. Since DARPA does not intend to directly provide data to any international participants, proposers are reminded that implementation of applicable agreements and licenses is the responsibility of the proposer.

All responsible sources capable of satisfying the government's needs may submit a proposal that shall be considered by DARPA. Historically black colleges and universities (HBCUs), small businesses, small disadvantaged businesses and minority institutions (MIs) are encouraged to submit proposals and join others in submitting proposals; however, no portion of this announcement will be set aside for these organizations' participation due to the impracticality of reserving discrete or severable areas of this research for exclusive competition among these entities. Independent proposals from government/national laboratories may be subject to applicable direct competition limitations, though certain federally funded research and development centers are excepted per P.L. 103-337§ 217 and P.L 105-261 § 3136. Proposers from government/national laboratories must provide documentation to DARPA to establish that they are eligible to propose and have unique capabilities not otherwise available in private industry.

##### **3.1.1 Procurement Integrity, Standards of Conduct, Ethical Considerations, and Organizational Conflicts of Interest**

Current federal employees are prohibited from participating in particular matters involving conflicting financial, employment, and representational interests (18 USC 203, 205, and 208). The DARPA program manager for this BAA is Mr. Robert McHenry. As of the date of first publication of the BAA, the government has not identified any potential conflicts of interest involving this program manager. Once the proposals have been received, and prior to the start of proposal evaluations, the government will assess potential conflicts of interest and will promptly notify the proposer if any appear to exist. (Please note the government assessment does NOT affect, offset, or mitigate the proposer's own duty to give full notice and planned mitigation for all potential organizational conflicts, as discussed below.) The program manager is required to review and evaluate all proposals received under this BAA and to manage all selected efforts. Proposers should carefully consider the composition of their performer team before submitting a proposal to this BAA.

All proposers and proposed subcontractors must affirm whether they are providing scientific, engineering, and technical assistance (SETA) or similar support to any DARPA technical office(s) through an active contract or subcontract. All affirmations must state which office(s) the proposer supports and identify the prime contract numbers. Affirmations shall be furnished at the time of proposal submission. All facts relevant to the existence or potential existence of organizational conflicts of interest (FAR 9.5) must be disclosed. The disclosure shall include a

description of the action the proposer has taken or proposes to take to avoid, neutralize, or mitigate such conflict. In accordance with FAR 9.503 and without prior approval or a waiver from the DARPA Director, a contractor cannot simultaneously be a SETA and performer. Proposals that fail to fully disclose potential conflicts of interests and/or do not have plans to mitigate this conflict will be returned without technical evaluation and withdrawn from further consideration for award.

If a prospective proposer believes that any conflict of interest exists or may exist (whether organizational or otherwise), the proposer should promptly raise the issue with DARPA by sending proposer's contact information and a summary of the potential conflict by email to the mailbox address for this BAA at BAA08-41@darpa.mil, before time and effort are expended in preparing a proposal and mitigation plan. If, in the sole opinion of the government after full consideration of the circumstances, any conflict situation cannot be effectively mitigated, the proposal may be returned without technical evaluation and withdrawn from further consideration for award under this BAA.

### **3.2 COST SHARING/MATCHING**

Cost sharing will be carefully considered where there is an applicable statutory condition relating to the selected funding instrument (e.g., for any other transactions under the authority of 10 U.S.C. § 2371). Cost sharing is encouraged.

### **3.3 OTHER ELIGIBILITY REQUIREMENTS**

#### **3.3.1 Collaborative Efforts**

Collaborative efforts and teaming are encouraged. Integrated system proposers are especially encouraged to seek innovative component technologies outside of traditional suppliers. Specific content, communications, networking, and team formation are the sole responsibility of the participants.

## **4.0 APPLICATION AND SUBMISSION INFORMATION**

### **4.1 ADDRESS TO REQUEST APPLICATION PACKAGE**

This solicitation contains all information required to submit a proposal. No additional forms, kits, or other materials are needed. Additional supporting information is available in the form of classified annexes to this BAA (see Section 1.1 for instructions on requesting the classified annexes). No formal request for proposal (RFP) or additional solicitation regarding this announcement will be issued. Requests for same will be disregarded.

### **4.2 CONTENT AND FORM OF APPLICATION SUBMISSION**

#### **4.2.1 Proposal Information**

The typical proposal should express a consolidated effort in support of one or more related technical concepts or ideas. Disjointed efforts should not be combined into a single proposal.

Restrictive notices notwithstanding, proposals may be handled, for administrative purposes only, by a support contractor. This support contractor is prohibited from competition in DARPA

technical research and is bound by appropriate nondisclosure requirements. Proposals and may not be submitted by fax or e-mail; any so sent will be disregarded.

Proposals not meeting the format described in the BAA may not be reviewed.

Proposers must submit an original and five (5) copies of the full proposal and one (1) electronic copy of the full proposal (preferred in Microsoft Word compatible format) on a CD-ROM. Each hard copy must be clearly labeled with BAA-08-41, proposer organization, proposal title (short title recommended), and Copy \_ of 6.

All administrative correspondence and questions on this solicitation, including requests for information on how to submit a full proposal to this BAA, should be directed to the administrative address below; e-mail is preferred.

BAA-08-41  
DARPA/TTO  
3701 North Fairfax Drive  
Arlington, VA, 22203-1716  
EMAIL: BAA-08-41@darpa.mil

DARPA intends to use electronic mail for correspondence regarding BAA-08-41. Any correspondence sent by fax will be disregarded (with the exception of prearranged classified fax transmissions).

#### **4.2.2 Proposal Format**

All full proposals must be in the format given below. Nonconforming proposals may be rejected without review. Proposals shall consist of two volumes. All pages shall be printed on 8-1/2 by 11 inch paper with type not smaller than 12 point. Smaller font may be used for figures, tables and charts. The page limitation for full proposals includes all figures, tables, and charts. Volume I, Technical and Management Proposal, may include an attached bibliography of relevant technical papers or research notes (published and unpublished) which document the technical ideas and approach upon which the proposal is based. Copies of not more than three (3) relevant papers can be included with the submission. The bibliography and attached papers are not included in the page counts given below. The submission of other supporting materials along with the proposals is strongly discouraged and will not be considered for review. Except for the attached bibliography and Section I, the unclassified portion of Volume I shall not exceed fifty (50) numbered pages. All full proposals must be written in English.

All proposals containing proprietary data should have the cover page and each page containing proprietary data clearly marked as containing proprietary data. It is the proposer's responsibility to clearly define to the government what is considered proprietary data.

#### **4.2.3 Volume I, Technical and Management Proposal**

##### Section I. Administrative

##### **A. Cover sheet to include:**

- (1) BAA number;

- (2) Technical area;
  - (3) Lead organization submitting proposal;
  - (4) Type of business, selected among the following categories: "LARGE BUSINESS", "SMALL DISADVANTAGED BUSINESS", "OTHER SMALL BUSINESS", "HBCU", "MI", "OTHER EDUCATIONAL", OR "OTHER NONPROFIT";
  - (5) Contractor's reference number (if any);
  - (6) Other team members (if applicable) and type of business for each;
  - (7) Proposal title;
  - (8) Technical point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), electronic mail (if available);
  - (9) Administrative point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), electronic mail (if available);
  - (10) Total funds requested from DARPA, and the amount of cost share (if any); and
  - (11) Date proposal was submitted.
- B. Official transmittal letter.

## Section II. Summary of Proposal

**This section provides an overview of the proposed work as well as an introduction to the associated technical and management issues. Further elaboration will be provided in Section III.**

- A. Innovative claims for the proposed research. This section is the centerpiece of the proposal and should succinctly describe the uniqueness and benefits of the proposed approach relative to the current state-of-art alternate approaches.
- B. Deliverables associated with the proposed research and the plans and capability to accomplish technology transition. Include in this section all proprietary claims to the results, prototypes, intellectual property, or systems supporting and/or necessary for the use of the research, results, and prototype. If there are not proprietary claims, this should be stated. Phase 1 deliverables should include at a minimum a system requirement report, preliminary design report (with WBS, IMS, and cost to level 4), an operational effectiveness estimate based on preliminary 6-DOF modeling, a procurement and lifecycle cost estimate, a preliminary weapon test and safety plan, and a final Phase 1 report. Phase 2 deliverables should include at a minimum a critical design report, a test readiness report, a weapon demonstration and test report, a final operational effectiveness estimate based on validated 6-DOF modeling, and a final Phase 2 report.
- C. Cost, schedule and payable milestones for the proposed research, including estimates of cost for each task in each fiscal year of the effort delineated by the prime and major subcontractors, total cost and company cost share, if applicable. A notional October 1, 2008 contract award date should be used for cost calculations. **Note: Measurable critical milestones should occur approximately every 6 (six) months after start of effort.** These payable milestones should demonstrate readiness to continue into the next part of the effort. Do not include proprietary information with the milestones. Additional interim non-critical management milestones are also highly encouraged at a regular interval.
- D. Technical rationale, technical approach, and constructive plan for accomplishment of technical goals in support of innovative claims and deliverable production. (In the proposal, this section should be supplemented by a more detailed plan in Section III.)

- E. General discussion of other research in this area.
- F. A clearly defined organization chart for the program team which includes, as applicable: (1) the programmatic relationship of team members; (2) the unique capabilities of team members; (3) the tasks and responsibilities of team members; (4) the teaming strategy among the team members; and (5) the key personnel along with the amount of effort to be expended by each person during each phase.
- G. A one-slide “penta chart” summary of the proposal in PowerPoint that quickly and succinctly indicates the main objective, key innovations, expected impact, and other unique aspects of the proposal. The penta chart template is available at <http://www.darpa.mil/TTO/solicitations>.

### Section III. Detailed Proposal Information

**This section provides the detailed discussion of the proposed work necessary to enable an in-depth review of the specific technical and managerial issues. Specific attention must be given to addressing both risk and payoff of the proposed work that make it desirable to DARPA.**

- A. Statement of work (SOW) - In plain English, clearly define the technical tasks and subtasks to be performed, their durations, and dependencies among them. The page length for the SOW will be dependent on the amount of the effort. For each task and subtask, provide:
  - A general description of the objective (for each defined task or activity);
  - A detailed description of the approach to be taken to accomplish each defined task or activity;
  - Identification of the primary organization responsible for task execution (prime, sub, team member, by name, etc.);
  - The exit criteria for each task or activity - a product, event or milestone that defines its completion.
  - Define all deliverables (reporting, data, reports, software, etc.) to be provided to the government in support of the proposed research tasks or activities.

*Note: It is recommended that the SOW be developed so that each phase of the program is separately defined. Do not include any proprietary information in the SOW.*

- B. Description of the results, products, transferable technology, and expected technology transfer path enhancing that of Section II. B. This should include consideration of weapon procurement and lifecycle costs, weapon certification requirements, and weapon production capacity required to support rapid acquisition and operational deployment of the system following prototype demonstration.
- C. Detailed technical rationale and approach enhancing that of Section II. This should include an assessment of the proposed concept’s ability to satisfy the functional characteristics as described in Section 8 of this BAA and supporting annexes.
- D. Comparison with other operational systems or ongoing research indicating advantages and disadvantages of the proposed effort.
- E. Discussion of proposer’s previous accomplishments and work in closely related research areas.

- F. Description of the facilities that would be used for the proposed effort, including proposed weapon test ranges and weapon test concept.
- G. Detail support enhancing that of Section II, including formal teaming agreements which are required to execute this program.
- H. Summary of cost schedules and payable milestones for the proposed research, including estimates of cost for each major task in each fiscal year of the effort delineated by the primes and major subcontractors, total cost, and any company cost share, if applicable. A notional October 1, 2008 contract award date should be used for cost calculations. **Note: Measurable critical milestones should occur every 6 (six) months after start of effort.** These payable milestones should demonstrate readiness to continue into the next part of the effort. Additional interim non-critical management milestones are also highly encouraged at regular intervals. Where the effort consists of multiple portions which could reasonably be partitioned for purposes of funding, these should be identified as options with separate cost estimates for each. Additionally, proposals should clearly explain the technical approach(es) that will be employed to meet or exceed each program metric and provide ample justification as to why the approach(es) is/are feasible. The milestones must not include proprietary information.

Proposers should use a program work outline or work breakdown structure (WBS) and common numbering system to integrate the proposal documents, including an integrated master schedule (IMS). The IMS and cost proposal numbering should be completed to at least level 3 and in detail sufficient to highlight the significant points discussed throughout the proposal and within the WBS budget allocation. WBS and IMS do not count against the Volume I page limit.

#### Section IV. Additional Information

A brief bibliography of relevant technical papers and research notes (published and unpublished) which document the technical ideas upon which the proposal is based. Copies of not more than three (3) relevant papers can be included in the submission.

#### **4.2.4 Volume II, Cost Proposal – {No Page Limit}**

Cover sheet to include:

- (1) BAA number;
- (2) Technical area;
- (3) Lead organization submitting proposal;
- (4) Type of business, selected among the following categories: "LARGE BUSINESS", "SMALL DISADVANTAGED BUSINESS", "OTHER SMALL BUSINESS", "HBCU", "MI", "OTHER EDUCATIONAL", OR "OTHER NONPROFIT";
- (5) Contractor's reference number (if any);
- (6) Other team members (if applicable) and type of business for each;
- (7) Proposal title;
- (8) Technical point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), electronic mail (if available);
- (9) Administrative point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), and electronic mail (if available);

- (10) Award instrument requested: firm fixed price (FFP), cost plus fixed fee (CPFF), cost plus award fee (CPAF), cost sharing contract – no fee, other type of procurement contract (*specify*), or other transaction;
- (11) Place(s) and period(s) of performance;
- (12) Total proposed cost separated by basic award and option(s) (if any);
- (13) Name, address, and telephone number of the proposer's cognizant Defense Contract Management Agency (DCMA) administration office (*if known*);
- (14) Name, address, and telephone number of the proposer's cognizant Defense Contract Audit Agency (DCAA) audit office (*if known*);
- (15) Date proposal was prepared;
- (16) DUNS number;
- (17) TIN number;
- (18) Cage Code;
- (19) Subcontractor information; and
- (20) Proposal validity period.

Detailed cost breakdown to include: (1) total program cost broken down by major cost items (direct labor, including labor categories; subcontracts; materials; other direct costs, overhead charges, etc.) and further broken down by task and phase; (2) major program tasks by fiscal year assuming a notional October 1, 2008 contract award; (3) an itemization of major subcontracts and equipment purchases; (4) an itemization of any information technology (IT) purchase<sup>1</sup>; (5) a summary of projected funding requirements by month; (6) the source, nature, and amount of any industry cost-sharing; and (7) identification of pricing assumptions which may require incorporation into the resulting award instrument (e.g., use of government furnished property, facilities, or information, access to government subject matter expert(s), etc.). The prime contractor is responsible for compiling and providing all subcontractor proposals for the procuring contracting officer (PCO). Subcontractor proposals should include interdivisional work transfer agreements (ITWA) or similar arrangements. Where the effort consists of multiple portions which could reasonably be partitioned for purposes of funding, these should be identified as options with separate cost estimates for each. For IT and equipment purchases, include a letter stating why the proposer cannot provide the requested resources from its own funding.

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- <sup>1</sup> IT is defined as “any equipment, or interconnected system(s) or subsystem(s) of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information by the agency. (a) For purposes of this definition, equipment is used by an agency if the equipment is used by the agency directly or is used by a contractor under a contract with the agency which – (1) Requires the use of such equipment; or (2) Requires the use, to a significant extent, or such equipment in the performance of a service or the furnishing of a product. (b) The term “information technology” includes computers, ancillary, software, firmware and similar procedures, services (including support services), and related resources. (c) The term “information technology” does not include – (1) Any equipment that is acquired by a contractor incidental to a contract; or (2) Any equipment that contains imbedded information technology that is used as an integral part of the product, but the principal function of which is not the acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information. For example, HVAC (heating, ventilation, and air conditioning) equipment such as thermostats or temperature control devices, and medical equipment where information technology is integral to its operation, are not information technology.”

Supporting cost and pricing information must be in sufficient detail to substantiate the summary cost estimates. Include a description of the method used to estimate costs and supporting documentation. "Cost or pricing data" as defined in FAR Subpart 15.4 shall be required if the proposer is seeking a procurement contract award of \$650,000 or greater unless the proposer request an exception from the requirement to submit cost of pricing data. "Cost or pricing data" are not required if the proposer proposes an award instrument other than a procurement contract (e.g., an other transaction). All proprietary subcontractor proposal documentation, prepared at the same level of detail as that required of the prime, shall be made immediately available to the government, upon request, under separate cover (i.e., mail, electronic email, etc.), either by the proposer or by the subcontractor organization.

#### **4.3 SUBMISSION DATES AND TIMES**

**The full proposal (original and designated number of hard and electronic copies) must be submitted to DARPA/TTO, 3701 North Fairfax Drive, Arlington, VA 22203-1714 (Attn.: BAA-08-41) on or before 4:00 p.m., local time (EST), August 6, 2008,** in order to be considered during the initial round of selections. BAA-08-41 will remain open until June 6, 2009, however, proposals submitted after the initial due date will be selected contingent upon the availability of funds and proposers are warned that the likelihood of funding is greatly reduced for proposals submitted after the initial closing date deadline.

DARPA will acknowledge receipt of complete submissions via email and assign control numbers that should be used in all further correspondence regarding proposals.

Failure to comply with the submission procedures may result in the submission not being evaluated.

DARPA will post a consolidated question and answer response before final full proposals are due. In order to receive a response to your question, submit your question by July 1, 2008 to BAA08-41@darpa.mil.

Proposers submitting classified information should also see Section 6.2.1 ("Security").

#### **4.4 INTERGOVERNMENTAL REVIEW (Not Applicable)**

#### **4.5 FUNDING RESTRICTIONS (Not Applicable)**

### **5.0 APPLICATION REVIEW INFORMATION**

#### **5.1 EVALUATION CRITERIA**

Evaluation of proposals will be accomplished through a scientific/technical review of each proposal using the following criteria, in order of descending importance: (a) Ability to meet program go/no-go metrics; (b) Technical approach; (c) Management approach; (d) Potential contribution and relevance to the DARPA and ONR missions; and (e) Cost and cost realism. Sub-criteria, where applicable, are of equal importance. Proposals will not be evaluated against each other since they are not submitted in accordance with a common work statement.

DARPA's intent is to review proposals as soon as possible after they arrive; however, proposals

may be reviewed periodically for administrative reasons. The following are descriptions of the above listed criteria:

### **5.1.1 Ability to Meet Program Go/No-Go Metrics**

The feasibility and likelihood of the proposed approach for satisfying the program go/no-go metrics are explicitly described and clearly substantiated. The proposal reflects a mature and quantitative understanding of the performance go/no-go metrics, the statistical confidence with which they may be measured, and their relationship to the concept of operations that will result from successful performance in the program.

### **5.1.2 Technical Approach**

All elements of the technical approach will be evaluated to determine how well they satisfy the overall goals of the program. A description of each of the sub-factors follows.

#### **CONCEPT**

- Extent to which the concept is capable of achieving overall program objectives.
- Extent to which the concept meets or exceeds the operational characteristics described in Section 8 and supporting annexes as substantiated by analysis or calculation.
- Extent to which the concept is technically credible, sufficiently detailed, and supported by analysis, data, or analogy.
- Demonstrated understanding of enabling technologies, counter systems, realistic operational environment, and transition requirements.
- Innovativeness of the concept, with emphasis on advances to anti-ship strike technology, including target discrimination, weapon survivability and lethality approaches that are assured of remaining effective against counter approaches into the foreseeable future.
- Extent to which proposed component solutions represent best possible supporting technologies within a complete integrated weapon system.

#### **DEVELOPMENT PLAN**

- Extent to which the plan utilizes a rational and executable systems engineering approach, including identifying appropriate milestone products and accomplishment criteria.
- Extent to which the plan provides a credible technology development roadmap with high assurance that all stated system characteristics will be met or exceeded within the desired timeframe, including a detailed, reasonable, and complete schedule.
- Extent and credibility of consideration and planning for rapid acquisition and operational deployment following prototype demonstration.

#### **TEST & DEMONSTRATION APPROACH**

- Credibility with regard to achieving a successful demonstration within program schedule constraints and consistent with the operational characteristics described in Section 8 and supporting annexes.
- Systematic derivation of incremental test plans and demonstration objectives that maximize value in technology development, risk reduction, and rapid transition support.
- Full consideration and identification of steps to conducting an integrated demonstration that meets or exceeds program objectives, including hardware/software quality assurance and component flight qualification.

- Full consideration of weapon test range and range safety coordination issues, including proper identification and costing of required GFE.

### **5.1.3 Management Approach**

The proposer's management and system engineering process will be evaluated to ensure that overall sound methodologies representing good management practices are used to complete all proposed activities. Streamlined and innovative business, teaming and technical management practices are encouraged. Each proposal will be evaluated as follows.

#### **RISK & RISK MANAGEMENT**

- Extent to which optimization of performance potential against risk exposure is thoroughly considered and supported.
- Overall risk to successful completion of development and demonstration tasks
- Comprehensive identification of significant sources of technical and programmatic risk, and their potential impacts on the program, including unique sources of risk associated with experimental weapon systems.
- Extent to which robust and detailed risk management plans are integrated into innovative program execution approaches to effectively mitigate identified sources of risk, including plans for the specific allocation of resources to systematically manage risk.

#### **FACILITIES & CORPORATE CAPABILITIES**

- Facility resource requirements identified and sufficiently dedicated to the program, including detailed access plans.
- Identification or development of an appropriate laboratory environment in which weapon sub-systems can be developed and tested.
- Extent to which proposer's internal processes are structured to support rapid prototype development and demonstration.
- Adequate planning, management, system engineering processes, and security to demonstrate the ability to successfully manage and deliver objective system development, demonstration, and transition.

#### **PROGRAM TEAM & KEY PERSONNEL**

- Extent to which the proposal is supported by best possible combinations of team members and key personnel to achieve program objectives.
- Experience and quality of key personnel, including the program manager, chief engineer, test manager, engineering staff, and subcontractor leads.
- Breadth and depth of the proposed team in appropriate technical areas.
- Effective utilization of subcontracting to support program objectives, including detailed description of all subcontracting arrangements and processes/methods, demonstration of clear lines of communication, and appropriate subcontractor incentive structure.

#### **PAST PERFORMANCE**

- Extent to which the proposer's team has relevant and favorable past performance to support design, development, and testing of developmental weapon systems.

- Extent to which the proposer's team has had relevant past performance in successfully fielding naval missile systems.

#### **5.1.4 Potential Contribution and Relevance to the DARPA and/or ONR Missions**

The potential contributions of the proposed effort with relevance to the national technology base will be evaluated. Specifically, DARPA's mission is to maintain the technological superiority of the U.S. military and prevent technological surprise from harming our national security by sponsoring revolutionary, high-payoff research that bridges the gap between fundamental discoveries and their military use. ONR coordinates, executes, and promotes the science and technology programs of the United States Navy and Marine Corps through schools, universities, government laboratories, and nonprofit and for-profit organizations; provides technical advice to the Chief of Naval Operations and the Secretary of the Navy; and works with industry to improve technology manufacturing processes.

#### **5.1.5 Cost and Cost Realism**

The objective of this criterion is to establish that the proposed costs are realistic for the technical and management approach offered, as well as to determine the proposer's practical understanding of the effort. This will be principally measured by cost per labor-hour and number of labor-hours proposed. The evaluation criterion recognizes that undue emphasis on cost may motivate proposers to offer low-risk ideas with minimum uncertainty and to staff the effort with junior personnel in order to be in a more competitive posture. DARPA discourages such cost strategies. Cost reduction approaches that will be received favorably include innovative management concepts that maximize direct funding for technology and limit diversion of funds into overhead.

Each proposal will be evaluated for:

- Affordability, including any private cost-sharing arrangements.
- Potential impact of intellectual property restrictions on long term program affordability.
- Cost realism and credibility of estimates.
- Schedule realism based on length and cost, where shorter schedules are preferred when all other factors are equal.
- Budget allocations for each task substantiate the scope of work identified.
- Facility, laboratory, and other non-labor costs are identified and considered.
- Costs in Phases 1 and 2 associated solely with the demonstration vehicle are clearly and separately identified.
- Assumptions and their cost impact as to any government furnished equipment (GFE) and services are clearly identified.

After selection and before award the contracting officer will negotiate cost and price reasonableness.

Award(s) will be made to proposers whose proposals are determined to be the most advantageous to the Government, all factors considered, including the potential contributions of the proposed work to the overall research program and the availability of funding for the effort. Award(s) may be made to any proposer(s) whose proposal(s) is determined selectable regardless of its overall rating.

NOTE: PROPOSERS ARE CAUTIONED THAT EVALUATION RATINGS MAY BE LOWERED AND/OR PROPOSALS REJECTED IF SUBMITTAL INSTRUCTIONS ARE NOT FOLLOWED.

## **5.2 REVIEW AND SELECTION PROCESS**

It is the policy of DARPA to ensure impartial, equitable, comprehensive proposal evaluations and to select the source (or sources) whose offer meets the government's technical, policy, and programmatic goals. Pursuant to FAR 35.016, the primary basis for selecting proposals for acceptance shall be technical, importance to agency programs, and fund availability. In order to provide the desired evaluation, qualified government personnel will conduct reviews and (if necessary) convene panels of experts in the appropriate areas.

Proposals will not be evaluated against each other since they are not submitted in accordance with a common work statement. DARPA's intent is to review proposals as soon as possible after they arrive; however, proposals may be reviewed periodically for administrative reasons. For evaluation purposes, a proposal is the document described in "Proposal Information," Section 4.2.1. Other supporting or background materials submitted with the proposal will be considered for the reviewer's convenience only and not considered as part of the proposal.

Restrictive notices notwithstanding, proposals may be handled for administrative purposes by support contractors. These support contractors are prohibited from competition in DARPA technical research and are bound by appropriate non-disclosure requirements.

Subject to the restrictions set forth in FAR 37.203(d), input on technical aspects of the proposals may be solicited by DARPA from non-government consultants or experts who are strictly bound by the appropriate non-disclosure requirements.

It is the policy of DARPA to treat all proposals as competitive information, and to disclose their contents only for the purpose of evaluation. Proposals will not be returned. The original of each proposal received will be retained at DARPA and all other non-required copies destroyed. A certification of destruction may be requested, provided that the formal request is received at this office within 5 days after receipt of select/non-select notification.

## **6.0 AWARD ADMINISTRATION INFORMATION**

### **6.1 AWARD NOTICES**

As soon as the evaluation of a proposal is complete, the proposers will be notified that 1) the proposal has been selected for funding pending contract negotiations, or 2) the proposal has not been selected. These official notifications will be sent via **U.S. mail** to the technical POC identified on the proposal coversheet.

## **6.2 ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS**

### **6.2.1 Security**

The Government anticipates that proposals submitted under this BAA will be unclassified, with the possible exception of an optional classified addendum for any classified information relative to sensitive technology. In the event that a proposer chooses to submit any documentation that may be classified, the following information is applicable.

**The classified addendum must be sent to DARPA separately from the unclassified proposal.**

If a classified addendum is submitted, it must indicate the classification level of not only the proposal itself, but also the anticipated award document classification level. It is the responsibility of the proposer to determine and accurately annotate the proper classification level of any classified information included in a classified addendum. Classified addenda shall not exceed a total of fifty (50) pages. Addenda should follow the same format as the overall proposal with traceability to the overall design. If any portion of the proposal WBS reveals classified information, or can be analyzed to determine classified details, then that portion of the WBS must be submitted as part of the classified addendum. WBS portions in the classified addendum should be cross referenced to the parent, unclassified WBS.

Proposers recognizing that their proposal may contain, reveal, or eventually lead to the development of classified information must contact the DARPA security manager listed below by July 6, 2008 for further information on security guidance, classification level, and proposal submittal procedures.

DARPA Security Manager / Program Security Officer  
Mr. Paul F. McLean  
DARPA/TTO  
3701 N. Fairfax Drive  
Arlington, VA 22203-1714  
Tel (STE): 703-526-6708  
Fax (Secure): 571-218-4361  
Fax (Unclassified): 571-218-4379  
Email: paul.mclean@darpa.mil

After reviewing the incoming proposals, if a determination is made that the award instrument may result in access to classified information, a DD Form 254 will be issued and attached as part of the award. Proposers choosing to submit a classified proposal must comply with applicable classification guide(s), which should be submitted to ensure that the proposal is protected appropriately.

Classified submissions shall be in accordance with the following guidance:

**Collateral Classified Information:** Use classification and marking guidance provided by previously issued security classification guides, the Information Security Regulation (DoD

5200.1-R), and the National Industrial Security Program Operating Manual (DoD 5220.22-M) when marking and transmitting information previously classified by another original classification authority. Classified information at the confidential and secret level may only be mailed via U.S. Postal Service (USPS) registered mail or U.S. Postal Service express mail. (Ensure package will be delivered/received by DARPA during the work week and will not sit in post office over the weekend.) All classified information will be enclosed in opaque inner and outer covers and double wrapped. The inner envelope shall be sealed and plainly marked with the assigned classification and addresses of both sender and addressee. The inner envelope shall be addressed to:

Defense Advanced Research Projects Agency  
ATTN: Tactical Technology Office  
Reference: (BAA-08-41)  
3701 North Fairfax Drive  
Arlington, VA 22203-1714

The outer envelope shall be sealed with no identification as to the classification of its contents and addressed to:

Defense Advanced Research Projects Agency  
Security & Intelligence Directorate, Attn: CDR  
3701 North Fairfax Drive  
Arlington, VA 22203-1714

All Top Secret materials should be hand carried via an authorized, two-person courier team to the DARPA CDR.

**Special Access Program (SAP) Information:** Contact the DARPA Special Access Program Central Office (SAPCO) 703-526-4052 for further guidance and instructions prior to transmitting SAP information to DARPA. Top secret SAP, must be transmitted via approved methods for such material. Consult the DoD Overprint to the National Industrial Security Program Operating Manual for further guidance. *Prior to transmitting SAP material*, it is required that you coordinate your submission with the DARPA SAPCO.

**Sensitive Compartmented Information (SCI) Data:** Contact the DARPA Special Security Office (SSO) at 703-812-1994/1984 for the correct SCI courier address and instructions. All SCI should be transmitted through your servicing Special Security Officer (SSO). SCI data must be transmitted through SCI channels only (i.e., approved SCI Facility to SCI facility via secure fax).

Proposers must have existing and in-place prior to execution of an award, approved capabilities (personnel and facilities) to perform research and development at the classification level they propose.

## 6.2.2 Intellectual Property

### 6.2.2.1 Procurement Contract Proposers

#### *Noncommercial Items (Technical Data and Computer Software)*

Proposers responding to this BAA requesting a procurement contract to be issued under the FAR/DFARS, shall identify all noncommercial technical data, and noncommercial computer software that it plans to generate, develop, and/or deliver under any proposed award instrument in which the government will acquire less than unlimited rights, and to assert specific restrictions on those deliverables. Proposers shall follow the format under DFARS 252.227-7017 for this stated purpose. In the event that proposers do not submit the list, the government will assume that it automatically has “unlimited rights” to all noncommercial technical data and noncommercial computer software generated, developed, and/or delivered under any award instrument, unless it is substantiated that development of the noncommercial technical data and noncommercial computer software occurred with mixed funding. If mixed funding is anticipated in the development of noncommercial technical data, and noncommercial computer software generated, developed, and/or delivered under any award instrument, then proposers should identify the data and software in question, as subject to government purpose rights (GPR). In accordance with DFARS 252.227-7013 Rights in Technical Data - Noncommercial Items, and DFARS 252.227-7014 Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation, the government will automatically assume that any such GPR restriction is limited to a period of five (5) years in accordance with the applicable DFARS clauses, at which time the government will acquire “unlimited rights” unless the parties agree otherwise. Proposers are admonished that the government will use the list during the source selection evaluation process to evaluate the impact of any identified restrictions, and may request additional information from the proposer, as may be necessary, to evaluate the proposer’s assertions. If no restrictions are intended, then the proposer should state “NONE.”

A sample list for complying with this request is as follows:

NONCOMMERCIAL			
Technical Data Computer Software To be Furnished With Restrictions	Basis for Assertion	Asserted Rights Category	Name of Person Asserting Restrictions
(LIST)	(LIST)	(LIST)	(LIST)

#### *Commercial Items (Technical Data and Computer Software)*

Proposers responding to this BAA requesting a procurement contract to be issued under the FAR/DFARS, shall identify all commercial technical data, and commercial computer software that may be embedded in any noncommercial deliverables contemplated under the research effort, along with any applicable restrictions on the government’s use of such commercial technical data and/or commercial computer software. In the event that proposers do not submit the list, the government will assume that there are no restrictions on the government’s use of such commercial items. The government may use the list during the source selection evaluation

process to evaluate the impact of any identified restrictions, and may request additional information from the proposer, as may be necessary, to evaluate the proposer's assertions. If no restrictions are intended, then the proposer should state "NONE."

A sample list for complying with this request is as follows:

COMMERCIAL			
Technical Data Computer Software To be Furnished With Restrictions	Basis for Assertion	Asserted Rights Category	Name of Person Asserting Restrictions
(LIST)	(LIST)	(LIST)	(LIST)

#### 6.2.2.2 Non-Procurement Contract Proposers

##### *Noncommercial and Commercial Items (Technical Data and Computer Software)*

Proposers responding to this BAA requesting an other transaction for prototype shall follow the applicable rules and regulations governing that instrument, but in all cases should appropriately identify any potential restrictions on the government's use of any intellectual property contemplated under that award instrument. This includes both noncommercial items and commercial items. Although not required, proposers may use a format similar to that described in Section 6.2.2.1 above. The government may use the list during the source selection evaluation process to evaluate the impact of any identified restrictions, and may request additional information from the proposer, as may be necessary, to evaluate the proposer's assertions. If no restrictions are intended, then the proposer should state "NONE."

#### 6.2.2.3 All Proposers – Patents

Include documentation proving your ownership of or possession of appropriate licensing rights to all patented inventions (or inventions for which a patent application has been filed) that will be utilized under your proposal for the DARPA program. If a patent application has been filed for an invention that your proposal utilizes, but the application has not yet been made publicly available and contains proprietary information, you may provide only the patent number, inventor name(s), assignee names (if any), filing date, filing date of any related provisional application, and a summary of the patent title, together with either: 1) a representation that you own the invention, or 2) proof of possession of appropriate licensing rights in the invention.

#### 6.2.2.4 All Proposers-Intellectual Property Representations

Provide a good faith representation that you either own or possess appropriate licensing rights to all other intellectual property that will be utilized under your proposal for the DARPA program. Additionally, proposers shall provide a short summary for each item asserted with less than unlimited rights that describes the nature of the restriction and the intended use of the intellectual property in the conduct of the proposed research.

### 6.2.3 Meeting and Travel Requirements

There will be a program kickoff meeting and all key participants are required to attend. Meetings associated with critical milestones and design reviews may be held at performer preferred locations. Performers should also anticipate periodic site visits at the program manager's discretion, and regular interaction with an independent team performing performance assessments and technical support for the government.

### 6.2.4 Human Use

All research involving human subjects, to include use of human biological specimens and human data, selected for funding must comply with the federal regulations for human subject protection. Further, research involving human subjects that is conducted or supported by the DoD must comply with 32 CFR 219, *Protection of Human Subjects* (<http://www.dtic.mil/biosys/downloads/32cfr219.pdf>), and DoD Directive 3216.02, *Protection of Human Subjects and Adherence to Ethical Standards in DoD-Supported Research* (<http://www.dtic.mil/whs/directives/corres/html2/d32162x.htm>).

Institutions awarded funding for research involving human subjects must provide documentation of a current Assurance of Compliance with federal regulations for human subject protection, for example a Department of Health and Human Services, Office of Human Research Protection Federal Wide Assurance (<http://www.hhs.gov/ohrp>). All institutions engaged in human subject research, to include subcontractors, must also have a valid Assurance. In addition, personnel involved in human subjects research must provide documentation of completing appropriate training for the protection of human subjects.

For all proposed research that will involve human subjects in the first year or phase of the project, the institution must provide evidence of or a plan for review by an Institutional Review Board (IRB) upon final proposal submission to DARPA. The IRB conducting the review must be the IRB identified on the institution's Assurance. The protocol, separate from the proposal, must include a detailed description of the research plan, study population, risks and benefits of study participation, recruitment and consent process, data collection, and data analysis. Consult the designated IRB for guidance on writing the protocol. The informed consent document must comply with federal regulations (32 CFR 219.116). A valid Assurance along with evidence of appropriate training all investigators should all accompany the protocol for review by the IRB.

In addition to a local IRB approval, a headquarters-level human subjects regulatory review and approval is required for all research conducted or supported by the DoD. The Army, Navy, or Air Force office responsible for managing the award can provide guidance and information about their component's headquarters-level review process. Note that confirmation of a current Assurance and appropriate human subjects protection training is required before headquarters-level approval can be issued.

The amount of time required to complete the IRB review and approval process may vary depending on the complexity of the research and/or the level of risk to study participants. Ample time should be allotted to complete the approval process. The IRB approval process can last between one to three months, followed by a DoD review that could last between three

to six months. No DoD/DARPA funding can be used towards human subjects research until ALL approvals are granted.

#### **6.2.5 Animal Use**

Any Recipient performing research, experimentation, or testing involving the use of animals shall comply with the rules on animal acquisition, transport, care, handling, and use in: (i) 9 CFR parts 1-4, Department of Agriculture rules that implement the Laboratory Animal Welfare Act of 1966, as amended, (7 U.S.C. 2131-2159); (ii) the guidelines described in National Institutes of Health Publication No. 86-23, "Guide for the Care and Use of Laboratory Animals"; (iii) DoD Directive 3216.01, "Use of Laboratory Animals in DoD Program."

For submissions containing animal use, proposals should briefly describe plans for Institutional Animal Care and Use Committee (IACUC) review and approval. Animal studies in the program will be expected to comply with the PHS Policy on Humane Care and Use of Laboratory Animals, available at <http://grants.nih.gov/grants/olaw/olaw.htm>.

All Recipients must receive approval by a DoD certified veterinarian, in addition to an IACUC approval. No animal studies may be conducted using DoD/DARPA funding until the USAMRMC Animal Care and Use Review Office (ACURO) or other appropriate DoD veterinary office(s) grant approval. As a part of this secondary review process, the recipient will be required to complete and submit an ACURO Animal Use Appendix, which may be found at <https://mrmc.amedd.army.mil/AnimalAppendix.asp>.

#### **6.2.6 Publication Approval**

Proposers are advised if they propose grants or cooperative agreements, DARPA may elect to award other award instruments. DARPA will make this election if it determines that the research resulting from the proposed program will present a high likelihood of disclosing performance characteristics of military systems or manufacturing technologies that are unique and critical to defense. Any award resulting from such a determination will include a requirement for DARPA permission before publishing any information or results on the program.

The following provision will be incorporated into any resultant procurement contract or other transaction:

When submitting material for written approval for open publication as described in subparagraph (a) above, the contractor/awardee must submit a request for public release to the DARPA TIO and include the following information: 1) Document Information: document title, document author, short plain-language description of technology discussed in the material (approx. 30 words), number of pages (or minutes of video) and document type (briefing, report, abstract, article, or paper); 2) Event Information: event type (conference, principle investigator meeting, article or paper), event date, desired date for DARPA's approval; 3) DARPA Sponsor: DARPA Program Manager, DARPA office, and contract number; and 4) Contractor/Awardee's Information: POC name, e-mail and phone. Allow four weeks for processing; due dates under four weeks require a justification. Unusual electronic file formats may require additional processing time. Requests can be sent either via e-mail to [tio@darpa.mil](mailto:tio@darpa.mil) or via mail to 3701 North Fairfax

Drive, Arlington VA 22203-1714, telephone (571) 218-4235. Refer to [www.darpa.mil/tio](http://www.darpa.mil/tio) for information about DARPA's public release process.

#### **6.2.7 Export Control**

Should this project develop beyond fundamental research (basic and applied research ordinarily published and shared broadly within the scientific community) with military or dual-use applications the following apply:

- (1) The Contractor shall comply with all U. S. export control laws and regulations, including the International Traffic in Arms Regulations (ITAR), 22 CFR Parts 120 through 130, and the Export Administration Regulations (EAR), 15 CFR Parts 730 through 799, in the performance of this contract. In the absence of available license exemptions or exceptions, the contractor shall be responsible for obtaining the appropriate licenses or other approvals, if required, for exports of (including deemed exports) hardware, technical data, and software, or for the provision of technical assistance.
- (2) The contractor shall be responsible for obtaining export licenses, if required, before utilizing foreign persons in the performance of this contract, including instances where the work is to be performed on-site at any government installation (whether in or outside the United States), where the foreign person will have access to export-controlled technologies, including technical data or software.
- (3) The contractor shall be responsible for all regulatory record keeping requirements associated with the use of licenses and license exemptions or exceptions.
- (4) The contractor shall be responsible for ensuring that the provisions of this clause apply to its subcontractors.

#### **6.2.8 Subcontracting**

Pursuant to Section 8(d) of the Small Business Act (15 U.S.C. 637(d)), it is the policy of the government to enable small business and small disadvantaged business concerns to be considered fairly as subcontractors to contractors performing work or rendering services as prime contractors or subcontractors under government contracts, and to assure that prime contractors and subcontractors carry out this policy. Each proposer who submits a contract proposal and includes subcontractors is required to submit a subcontracting plan in accordance with FAR 19.702(a) (1) and (2) should do so with their proposal. The plan format is outlined in FAR 19.704.

### **6.3 REPORTING**

The number and types of reports will be specified in the award document, but will include as a minimum monthly financial and technical status reports. The reports shall be prepared and submitted in accordance with the procedures contained in the award document and mutually agreed on before award. In addition to the formal design reports described in section 4, reports and briefing material will also be required as appropriate to document progress in accomplishing program metrics. A final report that summarizes the project and tasks will be required at the

conclusion of the performance period for the award, notwithstanding the fact that the research may be continued under a follow-on vehicle.

The government anticipates holding informal bi-weekly status teleconferences. The objective of these teleconferences is to allow coordination of government objectives and contractor activities. Prior to the teleconferences, the contractor will forward an electronic copy to the program manager of a concise report outlining progress made since the preceding teleconference, suggested topics of discussion, and critical technical challenges to be faced before a subsequent teleconference.

### **6.3.1 Central Contractor Registration (CCR)**

Selected proposers not already registered in the Central Contractor Registry (CCR) will be required to register in CCR prior to any award under this BAA. Information on CCR registration is available at <http://www.ccr.gov>.

### **6.3.2 Representations and Certifications**

In accordance with FAR 4.1201, prospective proposers shall complete electronic annual representations and certifications at <http://orca.bpn.gov>.

### **6.3.3 Wide Area Work Flow (WAWF)**

Unless using another approved electronic invoicing system, performers will be required to submit invoices for payment directly via the Internet WAWF at <http://wawf.eb.mil>. Registration to WAWF will be required prior to any award under this BAA.

## **7.0 AGENCY CONTACTS**

DARPA will use electronic mail for all technical and administrative correspondence regarding this BAA, with the exception of classified communications and selected/not-selected notifications.

Administrative, technical or contractual questions should be sent via e-mail to BAA-08-41@darpa.mil. Classified questions should be transmitted in accordance with applicable classification level as described in Section 6.2. All requests must include the name, email address, and phone number of a point of contact.

#### Points of Contact

The technical POC for this effort is Mr. Rob McHenry

The contractual POC for this effort is Mr. Chris Glista

Electronic mail: BAA08-41@darpa.mil

DARPA/TTO

ATTN: BAA-08-41

3701 North Fairfax Drive

Arlington, VA 22203-1714

## **8.0 PROGRAM INFORMATION AND OPERATIONAL CHARACTERISTICS**

### **8.1 PROGRAM SUMMARY**

The Long Range Anti-Ship Missile Demonstration program is a joint DARPA/ONR effort to rapidly develop and demonstrate a ship launched standoff anti-ship strike weapon capable of achieving mission kill against selective surface targets at significant standoff ranges. The program will develop technologies that enable U.S. surface platforms to engage other surface units from well outside direct counter-fire ranges, with inherent capability to ensure weapon survivability against advanced defensive systems. The program should achieve robust integrated flight test of a prototype system no later than three years after contract award. Proposers are encouraged to provide best performance solutions based on innovative application of technologies that can realistically achieve flight status within this timeframe. Consideration should be given to terminal survivability and lethality approaches that are effective against current and projected ship defensive systems. The extensibility of terminal systems to future delivery vehicles with enhanced range, speed, or launch platform flexibility is also of interest.

The program will be conducted in two phases, and responses to this BAA should cover both phases with Phase 2 priced as an option. Performer(s) in Phase 1 will fully develop their system concepts, generate preliminary system designs, estimate procurement and lifecycle costs, and support government analytical evaluation of design effectiveness. Phase 1, approximately nine (9) months, will culminate in a preliminary design review (PDR) and independent technical assessment. Phase 2 performer(s) will be selected based on overall contractor performance and a technical assessment of their Phase 1 PDR results. Phase 2 will progress through detail design, component maturation and testing, system integration including subsystem verification testing, flight test planning, long lead procurement, and a critical design review (CDR). Upon successful completion of a CDR the performer will continue with final system fabrication, integration, and testing as required to achieve a full-scale flight test and integrated demonstration of kinematic performance, guidance, target discrimination and acquisition, terminal survivability techniques, and warhead lethality. It is strongly desired that the full effort, including the integrated demonstration, be completed within thirty-six (36) months from contract award.

Integrated system proposers should seek out innovative approaches for the objective operational characteristics. Although the intended demonstration under this effort is a ship launched anti-ship missile, solutions which could be adapted to other launch platforms, such as aircraft and submarines, and solutions which offer potential multi-mission capability for land strike, are considered advantageous.

### **8.2 GOVERNMENT MANAGEMENT APPROACH**

Awards may be funded solely by DARPA, solely by ONR, or jointly by both DARPA and ONR. Management approaches will vary accordingly, with the agencies jointly or individually taking responsibility for overall management of the program, including technical direction and security. Individual awards will have a clearly defined program manager from either DARPA or ONR.

It is anticipated that the government will employ an independent team to conduct detailed technical assessment of the effectiveness of proposed systems during Phase 1, and to provide

support for unique government capabilities during Phase 2. While this team will be funded independently, performers will be expected to support continuous and in-depth technical interaction throughout the effort, including providing all necessary design data (such as 6-DOF modeling parameters) to support operational effectiveness assessments.

### **8.3 PHASE 1 GO/NO-GO METRICS**

To be considered for continuation into Phase 2, the following measures will be used to assess Phase 1 program performance:

1. Successful completion of PDR.
2. Verification through simulation and/or analysis that the design is capable of achieving an effective range in accordance with the value presented in Annex A.
3. Verification through simulation and/or analysis that the design is capable of achieving an overall probability of mission kill greater than or equal to the value presented in Annex A against the exemplary target specified in Annex B.

### **8.4 OPERATIONAL CHARACTERISTICS**

Desired characteristics of the Long Range Anti-Ship Missile Demonstration prototype are as follows:

#### **8.4.1 Force / Platform Integration**

The system shall be fully compatible with the Mk41 Vertical Launch System (VLS) and associated infrastructure in all respects to support employment from current VLS equipped surface combatants, or shall provide equivalent compatibility with existing force structure and equipment. Favorable evaluation will be given to systems that maximize compatibility with existing components such as boosters, weapon control consoles, and communications links, and offer potential compatibility with submarine and tactical air launch platforms. Systems shall comply with insensitive munition (IM) and other applicable safety certification requirements. See Annex C for additional data regarding platform integration.

#### **8.4.2 Targeting, Guidance, and Control**

The system shall be capable of receiving pre-launch target point coordinates and achieving target intercept point with sufficient accuracy to support seeker effectiveness for the area of uncertainty that has developed during elapsed time to target based on nominal ship maneuver parameters. Total system performance should balance time to target, guidance accuracy, and seeker performance to demonstrate an effective operational solution. The system shall be capable of receiving in-flight updates of targeting data if available and altering the intercept point within flight limits. The system shall be capable of trajectory control to enable simultaneous time on target engagements and configurable approach vectors. The system must be capable of operating with degraded or denied GPS during the terminal phase. See Annex A for additional details.

#### **8.4.3 Range**

The system shall have an effective down range capability as specified in Annex A.

#### **8.4.4 Seeker**

The seeker shall be capable of positive classification of specified targets among numerous ships in the target area based on known target characteristics, and shall have sufficient accuracy to

enable specific aimpoint targeting as required to support lethality. The seeker shall minimize vulnerability to known or projected jamming and countermeasure methods. The seeker shall maintain adequate performance in adverse environmental conditions. Organic battle damage information (BDI) capability should be embedded into the system capable of transmitting terminal target classification data, aimpoint accuracy, fuse status, and other relevant information to support effectiveness estimation. While a specific communications link is not specified for BDI, the weapon should utilize a viable pathway and data format to maximize compatibility with existing or pending links and processing systems. Utilization of multiple sensor modalities is encouraged to improve target discrimination and minimize vulnerability. Additional information is provided in Annex A and Annex B.

#### **8.4.5 Survivability**

The terminal unit(s) shall maximize survivability against known and projected ship defensive systems. Additional information is provided in Annex A and Annex B.

#### **8.4.6 Lethality**

The system shall be capable of achieving mission kill for target long range SUW and AAW capability, defined as destruction or sustained disruption of the target's capability to effectively conduct long range SUW and AAW operations including employing weapons based on offboard cueing. Wide area, point target, non-kinetic effects, or combinations of the above from unitary or multiple warheads should be considered. Additional information is provided in Annex A and Annex B.